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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,391	04/13/2004	Alan L. Browne	H-205856	3380

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EXAMINER	
JEN, MINGJEN	
ART UNIT	**PAPER NUMBER**
3664	

NOTIFICATION DATE	DELIVERY MODE
12/06/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary	Application No.	Applicant(s)	
	10/823,391	BROWNE ET AL.	
	Examiner	**Art Unit**	
	IAN JEN	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 July 2010_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,11-19,32,39-46,49 and 54_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,11-19,32,39-46, 49 and 54_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _04/13/2204_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is response to the amendment filed on July 30th, 2010.

2. Claims 1, 11- 19, 32, 39-46, 49 and 54 are pending in current application.

3. Claims 2 – 9, 20 – 25, 27 – 32, 33 – 38, 47 -48 and 50- 53 have been withdrawn.

4. Claim 10 has been cancelled.

5. Claims 1, 39, 45 and 49 have been amended.

6. Claim 54 have been newly added.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 11 – 19, 26, 32, 39 – 46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koike (US Pat Pub No 2003/00006889) in view of Ochi et al (US Pat No 5913910).

As for claim 1, Koike shows a method of predicting severity of a potential collision of first and second vehicles (Para 0064 – 0068, Fig 6), the method comprising: determining a probability of the potential collision of the vehicles, the determining comprising increasing or

decreasing the probability using environmental data (Para 0092 – 0094; Para 0120; Para 0148 – 0150, See also Figure 19; Para 0087 for environmental data used) ; exchanging vehicle condition-defining signals between the first and second vehicles in response the probability of the potential collision being greater than a threshold value (Fig 30, S 225; Para 0217 - 0223), the vehicle condition-defining signals including a first vehicle condition-defining signal developed onboard the first vehicle and a second vehicle condition-defining signal developed onboard the second vehicle (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 - 0100); predicting onboard the first vehicle a severity of the potential collision for the first vehicle based on input including the first vehicle condition-defining signal and the second vehicle condition-defining signal (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134) ; and predicting onboard the second vehicle a severity of the potential collision for the second vehicle based on input including the first vehicle condition-defining signal and the second vehicle condition-defining signal (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134). Koike is silent regarding input to the determining includes driver state data. Ochi et al shows input to the determining include driver state data (, Col 5, lines 22- Col 6, lines 24).

It would have been obvious for one of ordinary skill in the art, to provide the driver state data, as taught by Ochi et al, to Koike, in order to provide basic mobile driving input information.

As for claim 11, koike shows the probability of the potential collision is greater than the threshold value if the first vehicle is less than a selected distance from the second vehicle (Para 0071 -0081; Para 0110 - 0121).

As for claim 12, koike shows the probability of the potential collision is greater than the threshold value if the vehicles are closing on each other (Para 0071 -0081; Para 0110 -0121).

As for claim 13, koike shows the probability of the potential collision is greater than the threshold value if an estimate of time until the potential collision is less than a selected time period (Para 0071 -0081; Para 0110 -0121; Fig 4B Step22; Para 0098 - 0100).

As for claim 14, koike shows the threshold value indicates that the potential collision is imminent (Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38).

As for claim 15, koike shows the threshold value indicates that the potential collision is nearly imminent (Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38).

As for claim 16, koike predicting the severity of the potential collision for the first vehicle includes estimating the order of potential collision occurrence when potential collisions with more than one vehicle are predicted for the first vehicle (Para 0071 -0081; Para 0110 - 0121; Fig 8, Step 38; Para 0134 – 0127; Para 0152 - 0156).

As for claim 17, koike shows predicting the severity of the potential collision for the first vehicle includes estimating vehicle trajectory after the potential collision (Para 0143 – 0157).

As for claim 18, koike shows predicting the severity of the potential collision for the first vehicle includes estimating the location of impact on the first vehicle (Para 0143 – 0157).

As for claim 19, koike shows the vehicle condition-defining signals are developed in response to one or more of vehicle geographic position data, vehicle onboard sensor data, stored vehicle identification data, and pre-collision sensor data (Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38; Para 0134 – 0127; Para 0152 – 0156, Para 0182; sensor section 218).

As for claim 26, koike shows the probability of the potential collision is greater than the threshold value (Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38; Para 0134 – 0127; Para 0152 – 0156, Para 0182; sensor section 218), command responsive to the severity of the potential collision for the first vehicle (Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38; Para 0134 – 0127; Para 0152 – 0156, Para 0182; sensor section 218). Koike is silent regarding transmitting a command to set a control on an occupant protection device on the first vehicle.

Ochi et al shows transmitting a command to set a control on an occupant protection device on the vehicle (Fig 2, brake controller 219, transmission controller 218, ignition timing controller 216; Fig10, Col 5, liens 10 – Col 6,lines 25).

It would have been obvious for one of ordinary skill in the art, to provide protection device as taught by Ochi et al, to koike, in order to avoid potential collision.

As for claim 32, Ochi et al shows a command to an occupant protection device, the command responsive to the probability of the potential collision (; Fig 2, brake controller 219, transmission controller 218, ignition timing controller 216; Fig10, Col 5, liens 10 – Col 6,lines 25; Fig 8, step 804 - 808; Col 4, lines 25 - 65).

It would have been obvious for one of ordinary skill in the art, to provide protection device as taught by Ochi et al, to koike, in order to avoid potential collision.

As for claim 39, koike shows a method of predicting severity of a potential collision of first and second vehicles (Fig 6), the method comprising: determining a probability of the potential collision of the vehicles (Fig 23, Step 170; Para 0175 – 0184); determining a probability of the potential collision of the vehicles, the determining comprising increasing or decreasing the probability using environmental data (Para 0092 – 0094; Para 0120; Para 0148 – 0150, See also Figure 19; Para 0087 for environmental data used) ; developing a first vehicle condition-defining signal for the first vehicle in response to one or more of first vehicle geographic position data, first vehicle on-board sensor data, first stored vehicle identification data, and first vehicle pre-collision sensor data (Fig 30, S 225; Para 0217 - 0223); and transmitting the first vehicle condition-defining signal to the second vehicle when the probability of the potential collision being greater than a threshold value; and predicting onboard the first vehicle a severity of the potential collision for the first vehicle when the probability of the potential collision being greater than a threshold value (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 – 0100; Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134; Para 0143 – 0157), wherein input to the predicting

includes one or more of the first vehicle geographic position data, the first vehicle on-board sensor data, the first stored vehicle identification data, and the first vehicle pre-collision sensor data (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 – 0100; Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134; Para 0143 – 0157). Koike is silent regarding input to the determining includes driver state data.

Ochi et al shows input to the determining include driver state data (, Col 5, lines 22- Col 6, lines 24).

It would have been obvious for one of ordinary skill in the art, to provide the driver state data, as taught by Ochi et al, to Koike, in order to provide basic mobile driving input information.

As for claim 40, koike shows receiving a second vehicle condition-defining signal from the second vehicle, wherein the input to the predicting further includes the second vehicle condition-defining signal (Fig 3, Fig 1, other vehicle; Para 0071 -0081; Para 0110 -0121; Fig 8, Step 38; Para 0134 – 0127; Para 0152 – 0156, Para 0182; sensor section 218).

As for claim 41, koike shows the probability of the potential collision is greater than the threshold value if the second vehicle is detected by the first vehicle and wherein the first vehicle condition-defining signal for the first vehicle announces the presence of the first vehicle to the second vehicle (Para 0064 - 0080; Para 0097 – 0100; Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0143 – 0157).

As for claim 42, koike shows threshold value if the potential collision is predicted to occur within a selected time period and wherein the first vehicle condition-defining signal for the first vehicle announces the presence of the first vehicle to the second vehicle (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 – 0100; Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54).

As for claim 43, koike shows developing a first vehicle condition-defining signal for the first vehicle occurs when the probability of the potential collision being greater than a threshold value (Fig 30, S 225; Para 0217 - 0223).

As for claim 44,koike shows developing a first vehicle condition-defining signal for the first vehicle occurs on a continuous basis while the first vehicle is being operated (Fig 33, 34; Para 0068 - 0080).

As for claims 45 and 54, koike shows a method of predicting severity of a potential collision of first and second vehicles (, Fig 6), the method comprising: determining a probability of the potential collision of the vehicles (Fig 23, Step 170; Para 0175 – 0184); determining a probability of the potential collision of the vehicles, the determining comprising increasing or decreasing the probability using environmental data (Para 0092 – 0094; Para 0120; Para 0148 – 0150, See also Figure 19; Para 0087 for environmental data used) ;exchanging vehicle condition-defining signals between the first and second vehicles when the probability of the potential collision being greater than a threshold value (Fig 30, S 225; Para 0217 - 0223), the vehicle condition-defining signals including a first vehicle condition-defining signal and a

second vehicle condition-defining signal (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 - 0100) ; predicting a severity of the potential collision for the first vehicle based on input including the first vehicle condition-defining signal and the second vehicle condition-defining signal (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134) ; and predicting a severity of the potential collision for the second vehicle based on input including the first vehicle condition-defining signal and the second vehicle condition-defining signal (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134). Koike is silent regarding input to the determining includes driver state data.

Ochi et al shows input to the determining include driver state data (, Col 5, lines 22- Col 6, lines 24).

It would have been obvious for one of ordinary skill in the art, to provide the driver state data, as taught by Ochi et al, to Koike, in order to provide basic mobile driving input information.

As for claim 46, koike shows one or more of the determining, exchanging, predicting a severity of the potential collision for the first vehicle, and predicting a severity of the potential collision for the second vehicle is performed by a system that is remote to at least one of the first vehicle and the second vehicle (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134).

As for claim 49, koike shows an apparatus for use onboard a first vehicle for predicting severity of a potential collision of the first vehicle and a second vehicle (, Fig 6, Fig 1, ECU 12) , the apparatus comprising: means for determining a probability of a potential collision between the first and second vehicles and determining a probability of the potential collision of the vehicles, the determining comprising increasing or decreasing the probability using environmental data (Para 0092 – 0094; Para 0120; Para 0148 – 0150, See also Figure 19; Para 0087 for environmental data used); means responsive to the determining for transmitting a first vehicle condition-defining signal developed onboard the first vehicle to the second vehicle when the probability of the potential collision being greater than a threshold value (Fig 23, Step 170; Para 0175 – 0184, Fig 2, Fig 3); means for receiving from the second vehicle a second vehicle condition-defining signal developed onboard the second vehicle (Fig 1, 16, Fig 4A, Fig 4B; Para 0064 - 0080; Para 0097 – 0100; Fig 2, Fig 3, Fig 5); and means for processing the first vehicle condition-defining signal and the second vehicle condition-defining signal for predicting the severity of the potential collision (Fig 6, Fig 8, Step 36 – 38; Fig 10, Step 52 – 54; Fig 16, Step 110 – 112; Para 0116 – 0121; Para 0129 – 0134; Fig 2, Fig 3, Fig 5). Koike is silent regarding input to the determining includes driver state data.

Ochi et al shows input to the determining include driver state data (, Col 5, lines 22- Col 6, lines 24).

It would have been obvious for one of ordinary skill in the art, to provide the driver state data, as taught by Ochi et al, to Koike, in order to provide basic mobile driving input information.

Response to Arguments

9. Applicant newly supplied claim limitation has been further considered and reviewed. Applicant's attention is now directed to the section 8 above where applicant newly recited claim limitation has now been addressed above.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Phanumphai (US Pat Pub 20050205331) shows input of driver state data for possible collision determination along with safety precaution device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IAN JEN whose telephone number is (571)270-3274. The examiner can normally be reached on Monday - Friday 9:00-6:00 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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/Ian Jen/
Examiner, Art Unit 3664
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664